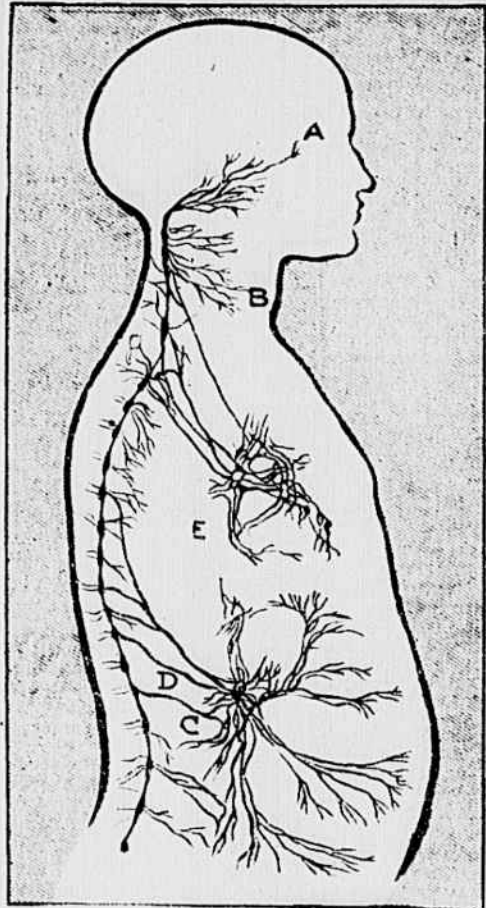
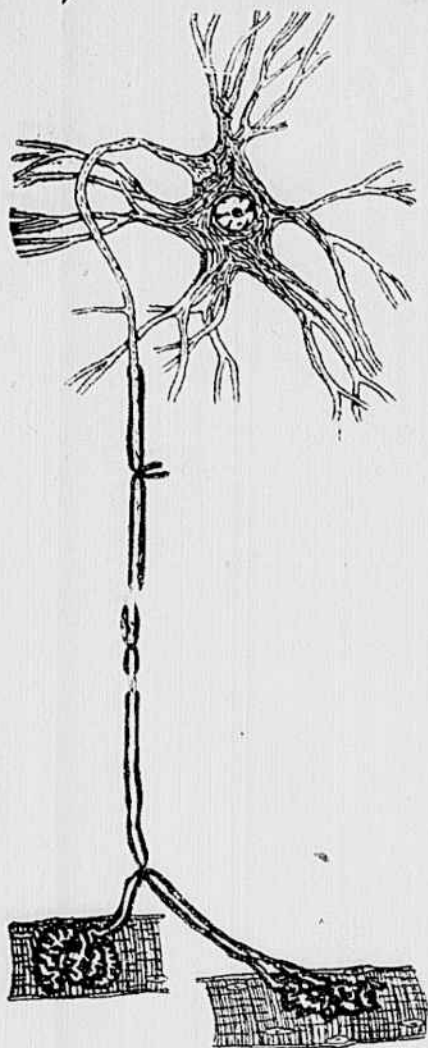


The War's Lesson to Us of What Real Preparedness Means



(A) The brain, (B) the centres about the brain, (C) the heart, (D) the stomach and abdominal organs, (E) the sympathetic nervous system. The ultimate physiological basis of efficiency in modern warfare. A diagram of the sympathetic nervous system, which is really a continuation of the brain. (A) The brain, (B) the centres about the brain, (C) the heart, (D) the stomach and abdominal organs, (E) the sympathetic nervous system. This explains why the nervous stress of the modern battle by disabling the sympathetic system produces paralysis and other muscular disabilities.

Dr. Woods Hutchinson.

The World's Foremost Physician-Author.

WELLINGTON said that the Battle of Waterloo was won on the cricket fields of Eton and Harrow. The next war—if it ever comes, which Heaven forbid—it will be won on the playgrounds and in the laboratories. Playgrounds, to make Young America, like Captain McNeil, of the Black Tyrone, "a man with two hands and two feet, and ahl his feet in his head"; laboratories, to teach him to mix the new war medicine, which smells to high Heaven, but works like a devil unchained.

For in modern war the battle is not between men and men, but between engines and engines—steam engines, gas engines, dynamo engines of flight, engines of destruction. Man is simply the mahout of these murderous steel monsters. The hand that holds the lever rules the world.

Providence, as Napoleon prophesied, is ever on the side of the heaviest artillery. The Twentieth Century god of war is literally the deus ex machina in a sense never intended by the ancients, not Mars, not Vulcan.

Rifles look well on dress parade, and bayonets are a useful thing to have on hand in case of emergency; but the real deadly weapons of this war have been howitzers, machine guns, and hand grenades. Even marksmanship has become of quite secondary importance, for less than a fifth of the deaths in France have been caused by rifle bullets, and over four-fifths by shrapnel and shells and bombs thrown by hand.

By a quaint irony of fate, the magnificent "Kitchener's Army," which its builder, alas! scarcely lived to see fully in action, has discovered that with the tremendous and increasing part played by grenades and hand bombs, a good stone thrower, or a handy man with a baseball, may make even a better and more effective soldier than a crack rifle shot.

One of the arguments most commonly urged against military training and other forms of preparedness for war is that they involve an enormous waste and dead loss, first of all of money for equipment, and second, of the time and energy of boys and young men, which will cause taxes to be raised, productiveness to be lowered, and all sorts of economic calamities.

Now, nobody loves or wants war, and all of us fervently hope and pray that it will never cross our borders, but a single week's thoughtful and unbiased observation of what has been going on for more than two years past on the other side of the Atlantic, not merely all over Europe, but in parts of Asia, Africa and Oceania as well, is sufficient to convince any intelligent man that it is one of the stand-

ard risks of calamity, like fire and flood and pestilence and other "acts of God," which must be reckoned with and insured against. Considered as an insurance premium, even our present proposed large army and navy appropriations can hardly be regarded as excessive, in view of the fact that the two leading belligerents, on each side, in the present contest, England and Germany, are now spending each \$25,000,000 a day.

When we face the serious and greatest problem of military training fairly and intelligently and see what can be saved from the wreck, so to speak, we find that it is perfectly feasible to give such a training to the rising generation as will not only prepare them for war, but also raise them to their highest possible pitch of health and efficiency in peace. In fact, we may be able in the name of war to attack and get rid of a score of ancient abuses and stupidities and injustices in both school and society.

Modern war calls for science, and science is precisely what our present system of education doesn't give yet. Military training in the schools may prove the great emancipator that we have been waiting for to free our system of education from the clerical shackles and classical absurdities of the past and place it upon a hygienic, rational and scientific basis. Instead of deploring it we should meet it half way and see if what we have not been able to obtain for the health and bodily welfare of the child in the frivolous name of play we cannot easily obtain in the name of war.

Modern military ideals can be made to work a real transvaluation of educational values.

First and most important of all, military training will balance and round out

Dr. Woods Hutchinson Describes the New Military Training Necessary to Make Us Fit to Cope with Science and Machinery in War and at the Same Time Give Us the Greatest Health and Efficiency in Peace

properly the dreadfully one-sided, bookish and indoor scheme of our present education. The aim to produce not merely a citizen, but a soldier, will do much toward giving their due weight and importance and place in the scheme of things, not merely in schools, but in business and in society, to bodily vigor and physical fitness.

Much of the opposition to and suspicion of military training in the schools arises from a misunderstanding of what modern military training really consists of. And this misunderstanding, it is only fair to say, is not confined solely to teachers and anxious parents and professional pacifists, but is shared in almost equal measure by a certain moss-grown type of army officers, both Federal and militia. Modern war has little practical use for the old-fashioned style of parade drill and elaborate military evolutions, marching and counter-marching, right wheeling and left wheeling, with the lines kept as straight as a ramrod, and every trouser stripe swinging forward at precisely the same instant and angle as every other.

These parade ground stunts and armory floor tricks are about as much use in actual twentieth century fighting as the cotillon or an Indian ghost dance, and any regiment which would attempt to pull one of them on the field of battle would be literally shot to pieces before it knew what had happened. They were sent to the scrap heap—excepting in military academies—twenty years ago by the high velocity magazine rifle, with its two-mile range, and the seven-mile howitzer with its exploding shell blew up the last remnant of their practical utility and turned man back five million years into a burrowing animal again.

Indeed, so little has this kind of so-called military training to do with real war that neither Germany nor France gives any of it in their schools at all, that is to say, under the age of eighteen years.

The chief thing which the Great General Staff demands of the eighteen-year-old conscript or recruit is not that he shall be familiar with the manual of arms or be able to perform fancy drills and marching evolutions, but that he shall be healthy, vigorous and tough, sound in mind and limb, able to march ten miles over country roads at ten minutes' notice without breaking down or wearing blisters all over his feet.

And, above all, be able to take care of himself, shelter, feed and protect his health in the open in all weathers. This can only be got by tramps, hikers, scouting trips, camping trips, school days and holidays, Saturdays and week-ends, the

whole year round, on skates or snowshoes or skis in the Winter season. And that would be pretty nearly the millennium, from a health point of view—call it military training or any other name you like, so long as we get it.

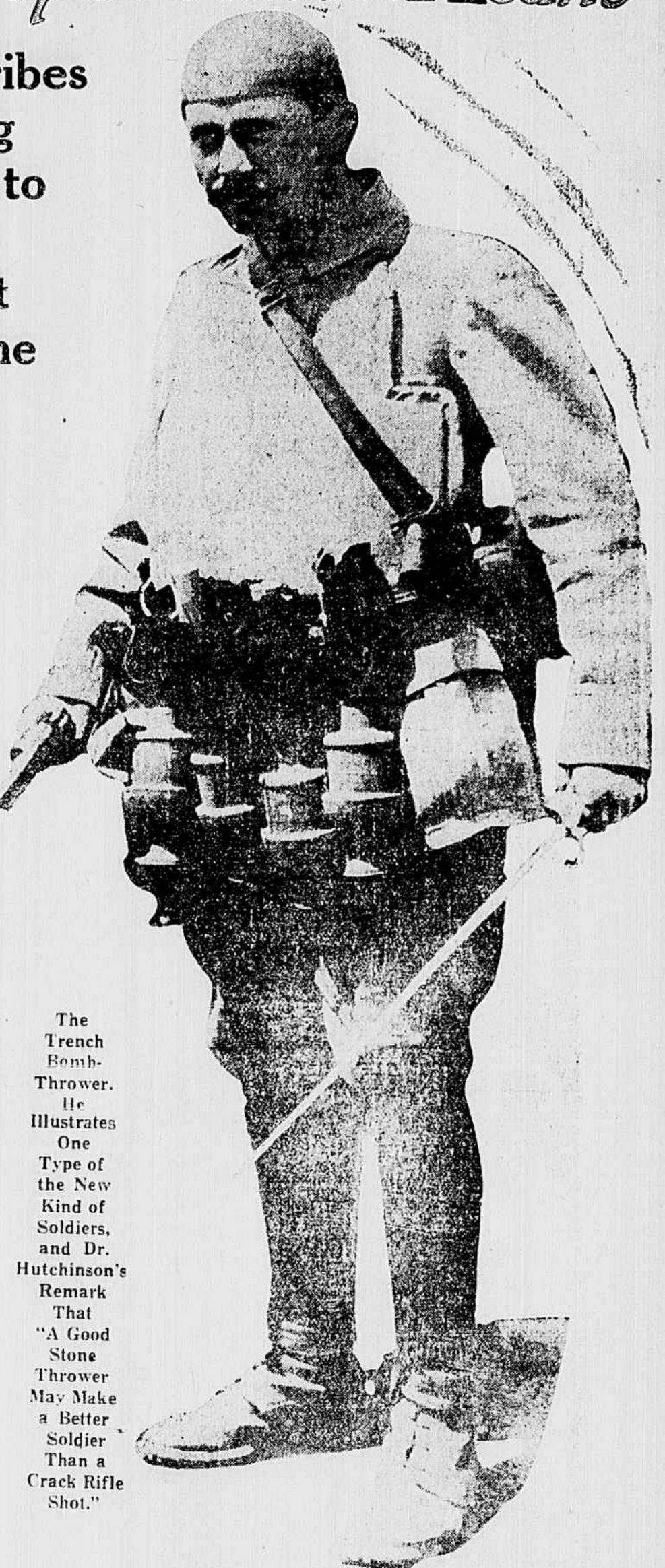
So much for the physical side of military training. What about the mental?

What subjects shall the youthful citizen soldier be taught? what trades and occupations shall he be trained for? There is only one answer, "All there are!" Every science, every art, every craft has its place of usefulness in modern war.

Modern war is not just pulling the trigger or lunging with the bayonet. It is electricity; it is aeronautics; it is chemistry; it is machinery of every imaginable sort of description, motors, submarines, aeroplanes, telephones, heliographs, mines, dams, cement work, road building, house building, and craft of modern civilization. Not only so, but one-half of modern war is fought in factories and another fourth on railroads and in supply departments. Every soldier on the firing line requires, according to Lloyd George, to support him there and keep him supplied three men and four women, on the railroads, in the munition works, in the equipment factories, in the hospitals and on the farm. Education for modern war would solve every problem of vocational training. Conscription no longer covers merely every possible "soldier," but every worker, both male and female, young and old, in the entire nation, and assigns to each one his or her place in the team.

Next after a good physique and vigorous health, the thing which the military training officers prize most highly in the new recruit is a thorough knowledge of modern science, particularly of chemistry, physics and mechanics. Now chemistry and physics are taught in our public schools, but in a most ladylike and harmless fashion. The curriculum makers were compelled by popular demand to put their names on the list of studies and upon the school programmes much against their will, because they didn't know anything about them and hated to have to read up. As a natural consequence, they have denatured and devitalized and stupidified them until they are about as melancholy and uninteresting and utterly devoid of any relation to actual life as Latin or English literature.

What is worse, both subjects are made so dull and difficult and technical that they are considered beyond the comprehension of the grades, and are usually



The Trench Bomb-Thrower. He Illustrates One Type of the New Kind of Soldiers, and Dr. Hutchinson's Remark That "A Good Stone Thrower May Make a Better Soldier Than a Crack Rifle Shot."

not introduced at all until the high school, to which chilly and rarefied altitude only about 10 per cent of our children ever attain, consequently, those who need modern science most, the workers, get little or nothing of it in the schools.

Yet the things that the soldier has to do, the things that the engineer has to do, the things that the munition worker, the hospital nurse and the army cook have to do are the very things that children of both sexes are most keenly and intensely interested in. The very things that they get no practical information on in the present curriculum. Childhood's irrepressible questions, what, and why, and how, whose answers are only to be found in full in the book of science. We have so-called science courses in the schools, but they begin at exactly the opposite end from the child's interest. They are making him hate science almost as much as he does now good literature. The war point of view would reserve all this and solve the great pedagogic problem of interest.

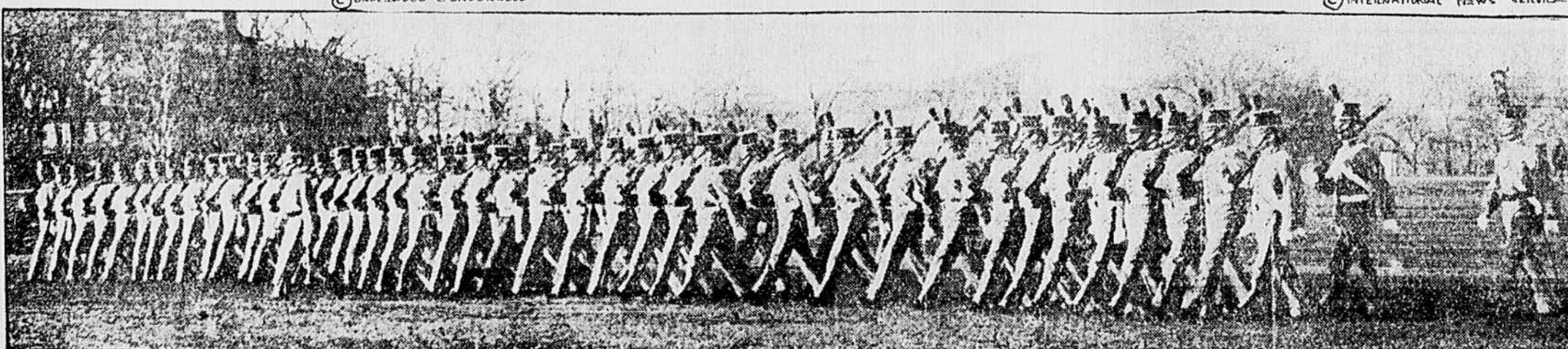
Training for war would change all this also, because though in time of peace it

might be possible for the future citizen to slip through life as a clerk or teacher or bookkeeper or lawyer, utterly and blissfully ignorant of modern science and living all his life long in the fourteenth century, in war he must know what century he is "at" or he is wiped out.

The soldier who can't run and, at need, repair an engine of some sort, from motor truck to machine gun and from aeroplane to ambulance, is almost as much out of it as a cowboy who can't ride. The active service uniform is no longer beautiful blue or scarlet cloth with gilt trimmings, but plain, unromantic khaki, and it will soon be overalls with grease spots on them.

Much as we may deplore the prostitution of all that knowledge and intelligence and executive ability to mere slaughter, rapine and conquest, it must be admitted that there is no incompatibility whatever between the most thorough and elaborate preparation for war and success and progress in the arts of peace. On the contrary, it would not be too much to say that the fullest and most intelligent preparation for war is one of the best trainings for efficiency in peace. It may well be that from the nettle danger, America may pluck the flower of safety, and that in the name and in the fear of war we may succeed in inducing the community to train and organize itself and the rising generation for service instead of mere success, for mutual helpfulness instead of competition, and for loyalty and devotion to the common good.

The "democracy of the dog tent," of the munition factory, of the hospital ward, may be the forerunner of a new and happier state, when only those things that make for true manhood, true womanhood, will count, and all other distinctions be wiped out.



The Difference Between the Old Drill and Modern Soldiering. West Point Cadets in One of the Snow Manoeuvres the War Has Sent to the Scrap Heap and Very Different-Looking Kaki-Cia Fighters Doing Their Work at the War Front.

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